BRUHAT BANGALORE MAHANAGARA PALIKE

Office of the Executive Engineer
Mahadevapura Division,ITPL Main Road, Bangalore-560 048

TENDER FOR THE:-

Maintenance of RO plant at Manjunath Nagara Marathalli in ward no.106 Marathahalli in Marathahalli Sub Division.

Office of the Executive Engineer,
Mahadevapura Division,
Bruhat Bengaluru Mahanagara Palike
Bangalore -560 048.

TENDER REFERENCE:	:	EE/MDP/TND/07/2024-25 Date: 15-03-2024
Pre-bid meeting at the office of Executive Engineer's office K R Pura Division, BBMP, Bangalore.	:	28/10/2024 at 11.30 Hrs
Last Date & Time for Tender Queries	:	25/10/2024 up to 16.00 Hrs.
Last Date for Submission of Tender Document.	:	29/10/2024 up to 16.00Hrs.
TIME AND DATE OF OPENING OF TECHNICAL Bids	:	30/10/2024 at 16.30Hrs.
PLACE OF OPENING OF TECHINCAL TENDERS	:	Office of the Executive Engineer, Mahadevapura Division,ITPL Main Road, Bangalore-560 048
TIME AND DATE OF OPENING OF PRICE TENDERS	:	Will be intimated to the Qualified Tenderers
PLACE OF OPENING OF PRICE TENDER	:	Office of the Executive Engineer, Mahadevapura Division,ITPL Main Road, Bangalore-560 048
ADDRESS FOR COMMUNICATION	:	Office of the Executive Engineer, Mahadevapura Division,ITPL Main Road, Bangalore-560 048

Contents

Section No.	Description	Pages
1	INVITATION FOR TENDERS (IFT)	4-7
2	QUALIFICATION INFORMATION	8- 17

BRUHAT BENGALURU MAHANAGARA PALIKE

TN.No: EE/MDP/TND/07/2024-25

Office of the Executive Engineer
Bruhat Bengaluru Mahanagara Palike
Mahadevapura Division,ITPL Main Road,
Bangalore-560 048
Dated: 15.10.2024.

EXPRESSION OF INTEREST (EOI) NOTIFICATION
SHORT TERM TENDER (Two Cover System)

(Through GOK KPPP Portal https://kppp.karnataka.gov.in only)

Tenders are invited by the Executive Engineer, Mahadevapura Division, BBMP for the Services mentioned below under the Karnataka Transparency in Public Procurement Act 2000 through electronic two cover tendering system (e-Procurement) in prescribed format from registered agency is with I.T, E.S.I, P.F, Labour Department and other statutory authority of Government of Karnataka Organizations.

The Tender Document can be downloaded from the GOK KPPP Portal (https://kppp.karnataka.gov.in) Website on payment of prescribed fee noted against item of work (non refundable) in the form of e-Payment through KPPP Portal Platform. The Tenderer should accompany a copy of the Registration Certificate valid up-to the Block Period and shall be submitted through KPPP Portal.

The Cost of Tender form is as per KPP Portal.

Sl. No	Name of The Work	EMD in Rs.	Category	Period for completion of Work
1.	Maintenance of RO plant at Hoodi Main road Near BBMP office in ward no.98 Hoodi in Hoodi Sub Division.	15,000/-	ST	5 Years / 60 Months
2.	Maintenance of RO plant at Hoodi Near Masjid in ward no.98 Hoodi in Hoodi Sub Division	15,000/-	SC	5 Years / 60 Months
3.	Maintenance of RO plant at Beltur colony Near Maramma Temple in ward no.99 Byrathi in Hoodi Sub Division.	15,000/-	Others	5 Years / 60 Months
4.	Maintenance of RO plant at Beltur Main road in ward no.99 Byrathi in Hoodi Sub Division	15,000/-	ST	5 Years / 60 Months
5.	Maintenance of RO plant at Lakshmisagara BBMP office behind in ward no.100 in Garudacharpalya in Hoodi Sub Division.	15,000/-	Others	5 Years / 60 Months
6.	Maintenance of RO plant near Samudaya Bhavan, Ambedkar Nagara in ward no.100 in Garudacharpalya in Hoodi Sub Division.	15,000/-	Others	5 Years / 60 Months
7.	Maintenance of RO plant at Kundalahalli village in ward no.102 AECS Layout in Hoodi Sub Division.	15,000/-	Others	5 Years / 60 Months
8.	Maintenance of RO plant at Kundalahalli Colony in ward no. 102 AECS Layout in in Hoodi Sub Division.	15,000/-	Others	5 Years / 60 Months
9.	Maintenance of RO plant Near Alphine Apartment ward no.101 Doddanekundhi in Hoodi Sub Division.	15,000/-	Others	5 Years / 60 Months
10.	Maintenance of RO plant at Chowdeshawari Temple road near BESCOM office, ward no.106 Marathahalli in Marathahalli Sub Division.	15,000/-	Others	5 Years / 60 Months
11.	Maintenance of RO plant at Balaji Layout, near Govt school Marathalli in ward no.106 Marathahalli in Marathahalli Sub Division.	15,000/-	SC	5 Years / 60 Months
12.	Maintenance of RO plant at Manjunath Nagara Marathalli in ward no.106 Marathahalli in Marathahalli Sub Division.	15,000/-	Others	5 Years / 60 Months
13.	Maintenance of RO plant at AshwathNagara near Govt	15,000/-	Others	5 Years /

	school in ward no.106 Marathahalli in Marathahalli Sub Division.			60 Months
14.	Maintenance of RO plant near Madhurrama temple Yamaluru in ward no.106 Marathahalli in Marathahalli Sub Division.	15,000/-	SC	5 Years / 60 Months
15.	Maintenance of RO plant near Kempapura Govt school in ward no.106 Marathahalli in Marathahalli Sub Division.	15,000/-	Others	5 Years / 60 Months
16.	Maintenance of RO plant at Marathalli slum Board Anand nagara in ward no.106 Marathahalli in Marathahalli Sub Division.	15,000/-	Others	5 Years / 60 Months
17.	Maintenance of RO plant near Kaikondarahalli Bus stop in ward no.107 Bellanduru in Marathahalli Sub Division.	15,000/-	Others	5 Years / 60 Months
18.	Maintenance of RO plant at Ramagondanahalli near Govt School in ward no.103 Whitefield in Whitefield Sub Division.	15,000/-	SC	5 Years / 60 Months
19.	Maintenance of RO plant at Nagondanahalli near Park in ward no.103 Whitefield in Whitefield Sub Division.	15,000/-	Others	5 Years / 60 Months
20.	Maintenance of RO plant at Immadihalli near GSLR in ward no.103 Whitefield in Whitefield Sub Division.	15,000/-	Others	5 Years / 60 Months
21.	Maintenance of RO plant at Sorahunase near Society in ward no.104 Varthur in Whitefield Sub Division.	15,000/-	Others	5 Years / 60 Months
22.	Maintenance of RO plant at Balagere near Water Tank in ward no.104 Varthur in Whitefield Sub Division.	15,000/-	Others	5 Years / 60 Months

Calendar of Events:-

1	Last date & time for Queries (only through online)	:	25/10/2024 at 16.00 Hours
2	Pre-bid meeting at the office of Executive Engineer's office Mahadevapura Division.	:	28/10/2024 at 11.30 Hours
4	Last Date for Submission of Tender document.	:	29/10/2024 upto 16.00 Hours
5	Opening of Technical Bid.	:	30/10/2024 at 16.30 Hours
6	Opening of Financial Bid.	:	4/11/2024 at 16.00 Hours

I. ELIGIBILITY CRITERIA:-

All terms and Conditions as per standard tender documents.

II. TERMS AND CONDITIONS:-

1. Tenderer should submit their EMD and tender processing fee in the form of e-payment through KPPP Portal (Credit Card, Direct Debit, National Electronic Fund Transfer (NEFT), and Over the Counter (OTC).
2. Bidders/Contractors can access tender documents on the website, fill them and submit the completed tender document into electronic tender on the website https://kppp.karnataka.gov.in
3. Should not incurred any loss in more than a year during the last 3 years ending 31st March 2024.
4. Tenderer should pay minimum wages to Staff including all taxes as applicable time to time.
5. In addition to EMD 10% of the quoted / bid amount shall be paid as additional security deposit through bank guarantee.
6. The successful tenderer should pay the 50% of entire tender bid amount in one lump within 7 days from the date of intimation of acceptance of the tender and remaining Amount will be 20% at the Start of 2nd Year, 20% at the Start of 3rd Year and 10% at the Start of 4th Year.
7. Tenderer has to meet the cost of chemicals used, water charges and electricity charges during the tender period.
8. The Tenderer should appoint trained persons who are certified by the state or National body concerned.
9. The Tenderer should agree that all the necessary repairs, annual maintenance of the and the annexure to be carried out at the Own cost of the Tenderer.
10. The bid Documents consists of Pre-qualification containing conditions of Contract, technical Specifications and Bill of quantities.

11. Based on an assessment of the information furnished in the cover –1 viz, Technical Pre-Qualification Documents those who prima-facie satisfy the eligibility criteria will be qualified and cover –2 Containing the financial bids shall be Considered for opening and evaluation.
12. The Tender is a Two Cover Tenders System Consisting of
    a) Technical Bid: The Technical bid should contain EMD, details of technical, financial and managerial capabilities to Execute of the work as per the requirements.
    b) Financial Bid: The financial bid should contain only the price bid. For such of those contractors, whose technical bids do not satisfy the eligibility, their financial bids will not be opened and the tenders will summarily be rejected.
15. Non submission of the tender attracts action as per conditions stipulated in the rules of registration of Contractors.
16. Tender documents may be downloaded from Government of Karnataka e-Procurement website https://eproc.karnataka.gov.in under login for Contractors. Aspiring Bidders/Contractors who have not registered in e-procurement should register before participating through the website https://kppp.karnataka.gov.in
17. For details, registration and e-payment visit GOK e-Procurement website https://kppp.karnataka.gov.in or contact e-Procurement Helpdesk at 080–22485867/22485927.
18. The Successful tenderer will have to execute an agreement with BBMP with in seven days of receipt of intimation, failing which his tender will be rejected.
19. The Tender will remain valid for 180 Days from the Date of Opening of Tender.
20. The work should be commenced with all earnestness with in seven days from the date of work order failing which it would be presumed that he is not interested in the work and action will be taken to get the work executed through alternate agency at the risk and cost of the former tenderer.
21. The Bruhat Bangalore Mahanagara Palike reserves the right to accept/reject any or the entire tender's without assigning any reasons.
22. Fee collection will be permitted to successful tender after execution of an agreement on stamp paper and on full payment of tendered amount. In case if 50% of the bid amount / tender amount is not paid within the stipulated time the BBMP is at liberty to forfeit the earnest money deposit and take further action to call for Re-tender by holding him responsible with risk and Cost for any losses incurred to the BBMP such Bidders shall loose his right to participate in retender again.
23. The assigned work total duration is Five years only.
24. For any type of breach of agreement or any other relevant causes BBMP is entitled to cancel the tender.
25. Any other details regarding the works & other information's can be obtained from the above office during office hours.
26. Corrigendum/ modification/corrections, if any, will be published in the website only. For any clarification on e- Procurement on HP HELPDESK 080-22485927/ 22485867.

Sd/-
Executive Engineer
Mahadevapura Division
Bruhath Bangalore Mahanagara Palike.

Copy Submitted to:

1. The Chief Commissioner for kind information.
2. Zonal Commissioner, Mahadevapura for kind information.
3. Joint Commissioner, Mahadevapura Zone for kind information
4. Chief Engineer Mahadevapura Zone for kind information
5. Public Relation Officer, BBMP with a request to take need full action to publish the same in any two leading daily news papers (in Kannada and English).
6. Notice Board. Office Copy.

Executive Engineer
Mahadevapura Division
Bruhath Bangalore Mahanagara Palike.

ANNEXURE

SCOPE OF WORK

BBMP invites offer from reputed agencies to provide Operation, Supervision and Maintenance of RO plant at Manjunath Nagara Marathalli in ward no.106 Marathahalli in Marathahalli Sub Division. (REVENUE CONTRACT FOR THE 05 YEARS) **The main purpose of** Running, supervision and Maintenance of RO plant at Manjunath Nagara Marathalli in ward no.106 Marathahalli in Marathahalli Sub Division. (REVENUE CONTRACT FOR THE 05 YEARS) **are as follows.**

1) To serve the public,
2) To maintain Running, supervision and maintenance of the R O Plant in good condition.
3) To generate revenue to the BBMP.
4) To protect the B.B.M.P. asset.
5) To provide security to Running, supervision and maintenance of the above mentioned R O Plant

MAINTENANCE FEE TO BE COLLECTED AT THE FOLLOWING RATES:-

Sl No	Description	Rates per month
1	R O Plant	Rs.5 for 20 Ltrs Bottle

Eligibility Criteria

1. The bidder has to submit with the attested copies of registration certificate of firm/company and submit the last 3 years of I.T Filling details. The company has a minimum turnover of Rs. 5.00 lakhs per year.
2. The agency should be registered with I.T, E.S.I, P.F, Labour Department and other statutory authority of Government of Karnataka.
3. Bidder should enclose minimum of three years experience certificate of the **Maintenance of R O Plant** from the owners/institutions/BBMP concerned officer (not below the rank of Executive Engineer in case of Indoor Stadium belongs to BBMP) State Government / Public Sector under taking / any other reputed private organizations/sports authority organizations, etc.
4. Should not incurred any loss in more than a year during the last 3 years.
5. Preference will be given to the agencies that have worked in BBMP and other statutory authority of Government of Karnataka with ISO certification.

6. Tenderer who are in any kind of arrears of revenue and contract amount to the BBMP are not eligible to offer their tenders.
7. Three years of minimum experience is required in this profession, are only eligible to participate in this tender.

Terms & Conditions:-

1) The Licensee agrees to abide the terms and conditions prescribed by the Licensor.
2) The bid will be decided on the basis of highest quoted price For 5 years.
3) Registration Number of the Firm along with GST, PAN Number allotted by the Authority should be enclosed with Bid.
4) **The Maximum of 3 No's RO Plants Maintenance can be awarded for Single Agency.**
5) Address Proof of the Resident.(Preferably AADHAR Card/ Voter ID)
6) The bidder Shall be the Permanent resident of Karnataka.
7) After payment for RFP document which is as per KPPP portal norms the RFP document may be downloaded.
8) Before Quoting the rate Contractor may visit the site to judge the conditions for existing R O Plant.
9) The Tender shall not include any conditions whatsoever. In case any conditions are included in the BID the same may not be taken into consideration.
10) It will be the responsibility of the successful bidder to submit the treated water test reports from any reputed Lab of all the RO Plants on quarterly Basis.
11) In the event of the Licensee committing breach of any of the conditions of the Contract, the Licensor reserves the right to cancel the License forthwith and to enter upon the licensed property without payment of any compensation and without assigning any reasons whatsoever to the Licensee.
12) During the contract period, for any casualties, accidents deaths, BBMP is not responsible and for which BBMP will not pay any compensation for the same.
13) If any casualties, accidents, deaths etc., are noticed repeatedly in a year the contract will be terminated.

14) **Electricity consumption charges and water supply consumption charges are to be borne by the Licensee only within the stipulated period.**

15) **The BBMP always empower to penalize up to 25% of the bid amount (Penalty) for Licensee for any breach of contract.**

16) The Bidders shall solely be responsible for the payment of minimum wages, allowance, bonus, gratuity and other benefits as per minimum wages act to its employees and responsible for the welfare of its employees as per the various labour legislations and regulations in force from time to time.

17) The Bidders shall solely be responsible for any commission or omission of its employees.

18) The Bidders shall arrange regular periodical / surprise checks to supervise the performance of the R O Plant and other facilities.

19) The Bidders shall maintain all records, register and such other required compliances contemplated under the provisions of all the relevant statues which interlaid include the water quality report, Contract labour (Regulation and Abolition), Act, Provident Fund act and rules payment of wages act and other relevant statues in force from time to time.

20) The duration of duty is eight hours per day per person. To keep the efficiency and alertness the overtime will be kept to the barest minimum.

21) The successful bidder shall comply with all the provisions of the labour act and any other applicable acts and rules and he shall solely be liable to any proceedings / actions / payment of penalties for any violation and non - compliance.

22) The successful bidder shall be solely responsible for the safeguarding of the entire properties / equipments of the BBMP assigned to them and any theft / loss / damages arising out of any lapse / negligence shall be rectified by the Bidders within a period of 15 days from the date of the incident failing which the BBMP shall forfeit the EMD, invoke the bank guarantee submitted by the Bidders and the contract is liable to be terminated.

23) If there is any lapse in providing the assigned service, same will be carried out by BBMP and the expenditure incurred for the same will be recovered from the Bidder

24) The EMD amount of the Successful tender will be retained by BBMP till the completion of contract period.

25) In addition to above further security deposit of 10% of contract value Through Bank Guarantee (Nationalized Banks Only) to be paid through D.D. in favor of **Chief Commissioner**, **BBMP** and same will be released after successful completion of the service / work.

26) FSD will be released after successful completion of assigned contract period of work

27) BBMP is not responsible for non-payment supposed to be paid by the bidder to any of his men / sub Bidders/ Companies / boards etc.,

28) Any disputes on the points between the Engineer-in Charge and license shall be referred to the Chief Commissioner, BBMP whose decision shall be given in writing, which will be final and legally binding on the Contract.

29) If BBMP notices any lapses in performance of the assigned work, EMD, FSD, will be forfeited And all other General contractual obligation stipulated under Vol-I of the tender document for procurement of Services.

30) **The Chief Commissioner, BBMP, Bangalore reserves the right either to reject or to accept any tender without assigning any reason before or after finalization of the Tender.**

31) The date of permission of the fee collection as notified in tender is subject to variation. If there is any delay in accepting the tender or other unavoidable delay for which no compensation will be paid to Bidders by the B.B.M.P.

32) The EMD credited by successful tender will be held as security Deposit for the due performance of his contract till the end of the contract period, During the period of contract if any loss caused to the BBMP Property due to the negligence of the Bidders such loss and the amount of fines levied will be recovered from the amount deposited by him.

33) The accepted Bidders is bound to abide by any other terms and conditions that may be insisted by the Chief Commissioner from time to time and he will have no right for claiming any remission or compensations in the contract amount under any circumstances.

34) For technical eligibility all the documents mentioned in the eligibility criteria are to be uploaded compulsorily within the time frame and technical

evaluation aggregate marks should be 100% (Final discretion is rest with BBMP).

35) If the tenderer fails to undertake the job satisfactorily at any period of time withdraws his services permanently or more than 3 consecutive weeks, BBMP has every right to cancel the contract and forfeit the security deposit without assigning any reason what so ever.

36) The Departmental Collection if made directly during the contract period for violation of any terms and conditions will not be refunded.

37) The Bidders shall not sell or transfer or sublet the contract in contravention of these conditions will result in cancellations of contractor.

38) The Bidders is bound to issue admission tickets got printed by him at his own cost as approved by the Chief Commissioner, half an hour before the time fixed for each batch.

39) The B.B.M.P is not liable for any loss or damages occurred during the period of contract which the Bidders may incur in respect of this contract for any reason what so ever. He is also responsible for the damages caused to the B.B.M.P property at the above place.

40) The Bidders shall maintain the complaint book within the premises of the R O Plant.

41) The Bidders shall exhibit the Instructions, User fee and timings. On the notice boards which will be displayed at the entrance of the R O Plant and other facilities.

42) The R O Plant should be closed for 30 days / annum for cleaning or repairs for which no rebate will be allowed to the successful Bidders.

43) The bidder shall open a register and keep an account of the persons entering the R O Plant every day, which shall be kept open for the inspection of the authorized officials of the BBMP at any time.

44) BBMP name board should be displayed at the entrance of the R O Plant.

45) The R O PLANT shall be kept open on all the days declared by the Chief Commissioner.

46) The Bidders is fully responsible and Accountable for any injuries or fatal accidents to the publics at R O Plant that may occur during Contact period.

47) Person indulge in mis-behavior shall leave premises on the direction issued by the R O Plant Supervisor on duty.

48) Bidder should have experience in handling the R O Plant.

49) Frequent maintenance of R O Plant should be conducted and results must be maintained in a register for verification by BBMP.

50) The BBMP is not be responsible for any loss/losses which may result due to power failure, machine failure.

51) In addition to the other conditions, general conditions are subscribed on the Notice Board kept at the entrance of the R O Plant for regular guidance of the R O Plant users. Those regulations are to be followed strictly.

52) Contravention of any of the above terms and Conditions of this notification and the agreement shall entitled for cancellation of the contract by the Chief Commissioner BBMP.

53) The Required minimum staff for training and maintenance is to be deployed by the Bidders, at his own cost.

54) The Security arrangements have to be provided by the Bidders all round the clock at his own cost.

55) The Licensee has to appoint experienced personnel and to bear the entire cost of his establishment as per prevailing rules and regulations.

56) The expenses towards the required Electricity consumption charges replacement of machinery parts, other repairs etc., required for maintaining the R O Plant in a satisfactory condition is to be borne exclusively by the Licensee only.

57) The Licensee agrees to hand over possession of the R O Plant to the Licensor in the same condition in which as it was in the condition at the time of handing over to Licensee with reasonable wear & tear and also Licensee should handover all the Items which already installed by the Licensee and Licensor without any damages.

58) The Licensee should withdraw the personals appointed by him immediately after the License period is completed and the Licensor will not appoint them or continue them in service after the License period is completed under any circumstances.

59) **For delay in payment of agreed amount the Licensee is liable to pay an interest amount at the rate of 18% per annum.**

60) D.G. backup should be installed and maintained.

61) **The agreed amount shall be paid on or before of every 30th of April of the subsequent years upto the stipulated time frame as agreed.**

62) Strictly the toilets & premises etc., should always be maintained in hygienic condition.

63) First Aid box should be kept in the premises of the R O Plant area to attend casualties if any and a doctor on call to be earmarked. The details of the doctor on call and the tie-up to be furnished to the BBMP authorities by the license at the time of signing the agreement.

64) **B.B.M.P is empowered to change any conditions of contract whenever required.**

65) All the documents in original are to be submitted to this office before execution of agreement, otherwise EMD and FSD will be forfeited and the tender will be rejected.

66) **The assigned license is for Five year only.**

67) Safety and security measures to be taken up are to be demonstrated before executing agreement.

68) The Tender is a Two Cover Tenders System Consisting of

A) Technical Bid: The Technical bid should contain EMD, details of technical,- financial and managerial capabilities experience to execute the said work as per the requirements and all the requirements mentioned in the eligibility criteria.

B) Financial Bid: The financial bid should contain only the **price bid.** For such of those bidders, whose technical bids do not satisfy the eligibility criteria their financial bids **will** not be considered and the tenders will be rejected.

69) **The E.M.D. will be forfeited for non-submission of tender.** Successful bidders should submit the E.S.I. and P.F. certificate obtained from the concerned department.

70) Safety and security measures are to be taken and should demonstrate before executing agreement

71) Bidder should quote total bid amount for Five years in a single lump. (As shown in Format VII).

72) The bidder shall not have incurred any loss during last 5 Years.

73) **Only the bidders** who qualifies in technical evaluation (cover no. 1) they will be eligible for opening the financial bids (cover no.2)

74) Bidders who are defaulters in payment of any kind of revenue and contract amount to the BBMP **are not eligible to participate in tender.**

75) Tender documents may be downloaded from Government of Karnataka KPPP website https://kppp.kamataka.gov.in under login for Contractors. Aspiring Bidders/Contractors who have not registered in e- procurement should register before participating through the website https: //kppp.karnataka.gov.in.

76) For details, registration and e-payment login GOK KPPP website https:// Kppp.kamataka.gov.in or contact KPPP Helpdesk at 080-25501216/25501227.

Signature of the Contractor

Executive Engineer
K R Pura division,
BBMP

FINANCIAL BID DOCUMENT

Name of the Bidder:
Address for Correspondence :
Telephone/Mobile :
Tender number:

Our financial proposal is as given below.

Sl.No	**Description**	**Total Amount payable for Five years** (in Rs.)	**Amount in Words**

		(all inclusive)	
1	Maintenance of RO plant at Vignana Nagara Jain Height Appartments in ward No. 95 Vignana Nagara of HAL Airport Sub Division		

Note: The bid will be decided on the basis of highest quoted price for 5 years.

Signature of the Tenderer with Seal

Format for providing previous general experience

Sl.No	Name of the Project	Client Details	Value of the Project	Status of the project/Timely/Completion/Cost over runs/Meeting the design objectives

Details of Experience in Similar projects

To be furnished for relevant and similar projects executed by the bidder(please do not mentioned ongoing or incomplete projects here)

Sl. No	Name of the project	Client Details	Value of the Project	Type of Contract	TURN KEY/BOOT/BOO/DBOT.ETC	Status of the project/timely completion/cost over run/meeting the design objectives